

WHAT IS CLAIMED:

1. A method of reducing light scattering in a projection transparency formed with a electrostatically deposited color image comprising:

5 providing a transparent support substrate;

 forming an electrostatically deposited color developer image on the support substrate, the color developer image containing at least 25% by weight of organic liquid carrier, the color developer having dispersed particles comprising thermoplastic polymer therein, said dispersed particles having an effective Tg; and

10 heating the color developer image on the support at a temperature and for a time that the thermoplastic polymer coalesces and at least some of the organic liquid carrier evaporates at a rate that free volume between the particles is reduced and light scattering is thereby reduced.

15 2. The method of claim 1 wherein heating is performed at a temperature at least 100⁰C above the effective Tg of the dispersed particles.

3. The method of claim 1 wherein the free volume is reduced to less than 12% by volume of dried color developer.

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4. The method of claim 2 wherein the free volume is reduced to less than 10% by volume of dried color developer.

25 5. The method of claim 2 wherein heating is performed at between 150 and 160⁰C to coalesce the dispersed particles and evaporate organic liquid carrier.

6. The method of claim 5 wherein organic liquid carrier is evaporated to leave between 1 and 3% by weight of dried liquid developer as organic carrier.

7. The method of claim 2 wherein the electrostatically deposited color image is first formed on an intermediate surface and then physically transferred to the transparent support substrate.

5 8. The method of claim 2 wherein the the electrostatically deposited color image is electrostatically deposited onto the transparent support substrate.

9. The method of claim 3 wherein the electrostatically deposited color image is first formed on an intermediate surface and then physically transferred to the transparent support substrate.

10 10. The method of claim 3 wherein the electrostatically deposited color image is electrostatically deposited onto the transparent support substrate.

15 11. The method of claim 2 wherein applied force on the deposited color image during heating was at least 8 lb/in².

12. The method of claim 3 wherein applied force on the deposited color image during heating was at least 8 lb/in².

20 13. The method of claim 2 wherein applied force on the deposited color image during heating was between 8 lb/in² and 34 lb/in², dwell time during heating was between 0.01 and 0.08 seconds, and lineal speed of the deposited color image during heating was between 3 and 8 inches per second.

25 14. The method of claim 3 wherein applied force on the deposited color image during heating was between 8 lb/in² and 34 lb/in², dwell time during heating was between 0.01 and 0.08 seconds, and lineal speed of the deposited color image during heating was between 3 and 8 inches per second.

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15. The method of claim 4 wherein applied force on the deposited color image during heating was between 8 lb/in² and 34 lb/in², dwell time during heating was between 0.01 and 0.08 seconds, and lineal speed of the deposited color image during heating was between 3 and 8 inches per second.

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16. The method of claim 5 wherein applied force on the deposited color image during heating was between 8 lb/in² and 34 lb/in², dwell time during heating was between 0.01 and 0.08 seconds, and lineal speed of the deposited color image during heating was between 3 and 8 inches per second.

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17. A color projection transparency image formed from an electrostatically deposited color liquid developer comprising:

a transparent polymeric substrate;

a color image comprising coalesced polymeric particles and color pigment that

15 forms a film;

wherein the film formed from the coalesced polymeric particles comprises less than 12% free volume.

18. The color projection transparency of claim 17 wherein the film comprises less than
20 10% free volume.

19. The color projection transparency of claim 17 wherein the film comprises less than 5% free volume.

25 20. A color projection transparency image formed according to the method of claim 1.

21. A color projection transparency image formed according to the method of claim 2.

22. A color projection transparency image formed according to the method of claim 3.

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23. A color projection transparency image formed according to the method of claim 16.

24. A color projection transparency image formed from an electrostatically deposited color liquid developer comprising:

a transparent polymeric substrate;

5 a color image comprising coalesced polymeric particles having an effective Tg and color pigment that forms a film;

wherein the film formed from the coalesced polymeric particles comprises less than 12% free volume and displays at least 20% less light scatter of visible light transmitted by the color pigment than a transparency film formed from the same color liquid developer

10 deposited in an identical process, but dried at a temperature no more than 80°C above the effective Tg of the polymeric particles.

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